IV. *An Anatomical Deſcription of Worms, found in the Kidneys of Wolves, in a Letter from Mr.* James Theodorus Klein, *Secretary of the City of* Dantzick, *F. R. S. to Sir* Hans Sloane, *Bart.* &c.

I Now lay before you, Sir, ſome Worms found in the Kidneys of Wolves, to which we commonly give the Name of Vipers. Of theſe one may read in divers Places of the *Curioſities of Art and Nature,* collected at *Breſlaw.* They were ſent to me from *Sewaldia,* in *Eaſtern Pruſia,* the Eſtate of a Gentlewoman named Madam *Roſe.*

The firſt PLATE.

Fig. 1. exhibits a female Worm found in the Kidney of a ſhe Wolf.

Fig. 2. The Kidney of a Wolf, reſembling a Bag, on Account of the almoſt entire Conſumption of its *Parenchyma.* It contained eight Worms, ſome of a yellowiſh, others of a Blood Colour ; *two* of which were *Females, ſix Males.*

Being deſirous to ſee the Diſſection of theſe from the Bag, I ſent for my good Friend, the moſt learned and ingenious *David Kade,* M. D.

The Diſſection of each Sex is ſhewn in

The ſecond PLATE.

The *Females* were more than twice longer and thicker than the Males. They were furniſhed with three very viſible Holes ; the firſt of which perform-ed

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ed the Function of the Mouth; the ſecond of the *Anus*; the third of the *Vulva*. This laſt Hole is ſeen under the Belly, about 1 $\frac{1}{2}$ Inch from the Mouth. (*Fig.* 1. *a*, *b*, *c*.

The membranous Skin was marked with annular Fibres, and 7 or 8 Cheſnut-coloured Lines (*Fig.* 1. *d*.) running the whole Length of the Worm. The Skin being cut, a limpid Humour iſſued forth, and then appeared the tranſverſal Fibres interlaid on every Side with the *Viſcera*, and are all round about inſerted into the Skin in the Interſtices of the *Veſicles* (*of which hereafter*) and at the ſame Time the *Viſcera* appeared, which the *ſole* Parts deſtin'd for *Nutrition* and *Generation* ſeem to make up.

As to the firſt, or alimentary Paſſage, it is compoſed of two Canals, one whereof (*Fig.* 2. *b*, *b*.) which begins at the Mouth, and is about 2 Inches long, ſmooth, fleſhy, whitiſh, and endow'd with thick Coats, ſerves for receiving Nouriſhment. As this Duct proceeds with equal Thickneſs, it is once reflected and retorted before it enters the other (*Fig.* 2. *c*, *c*, *c*, *d*.) which is of a dark brown Colour, much broader and tenderer than the firſt, flatted, membranous, covered with very fine Coats, wrinkled like a *Swathing Cloth*, then runs into tranſverſal and winding Sinews, and extends in a ſtrait Line to the *Anus*. The inner Coat of this Canal ſeemed ſomewhat rough, and as it were ſtrew'd with Duſt. The contained Liquor was perfectly fluid, and of a faint ſooty Colour.

But the Organs of Generation we found thus. Near the *Anus* was fix'd to the Skin, the End of a whitiſh tender Veſſel, which thence proceeded ſtrait to the Beginning of the alimentary Canal, where reflecting

flecting towards its Origin, and again reſuming its firſt Way, after being contorted and implicated in many and various Windings and Curves, widens and ſtraitens here and there, until at length becoming more and more capacious, it forms a little Bag, for which a whitiſh, fine, ſmooth Canal, about an Inch long, covered with pretty thick Coats, piercing thro' the Skin 1½ Inch from the Mouth, prepares an Outlet, marked under the Belly with a Caruncle (*Fig.* 1. *c. Fig.* 3 *and* 4. *b.*) This little Canal may be, not improperly, called the *Oviduct* or *Vagina.*

The Colour of theſe Parts is not every where the ſame; for of whitiſh at the Beginning, in the Progreſs it inſenſibly becomes darker: And at length, where the Veſſel acquires a greater Volume, and eſpecially where it ſtretches forth into the Bag, it is of a Cheſnut Colour. And as far as this Cheſnut Colour continues, the Veſſel is thick ſtuffed with *Myriads* of Eggs, and therefore is to be called the *Ovary.*

The Eggs, whoſe Number is certainly incredible, ſeen with the naked Eye, reſemble a *Magma* of a brown Colour; but viewed through thoſe Microſcopes, which in the *Engliſh Apparatus* bear the ſecond and third Number, they are of the Figure marked *a* and *b* in *Fig.* 5.

The Surface of the inner Skin which incloſed the abdominal Contents, was all beſet with ſmall whitiſh Bladders, of different Figures and Bulks, pouring out a Lymph upon tearing them. Theſe were in the Females.

Though the Integument of the *Male* be marked with annular Fibres, and as many Cheſnut-coloured Lines as that of the *Female*, throughout its whole

Length, yet his external Shape differs from that of the *Female*, *Firſt*, Becauſe, as I have already ſaid, he is much leſs. *Secondly*, Becauſe, the third Hole, *viz.* that under the Belly, is wanting in the *Male*. *Thirdly*, Becauſe the *Anus* of the *Male* is ſurrounded with a thick cartilaginous Membrane, of near an orbicular Figure, about a Line broad, externally convex, internally concave; on the Middle of which appears a Tubercle, divided by a fine Slit, which lets out the Excrements and a very ſmall capillary Proceſs (*Fig.* 6. *k.*)

The Cavity of the Belly contained a limpid Humour, the tranſverſal Fibres, the alimentary Canals, and ſpermatic Veſſels.

The alimentary Paſſages had the ſame Situation and Structure as in the Female; the anterior Canal was of a whitiſh Colour, the poſterior, or wrinkled one, of a pale brown.

The ſpermatick Veſſels were very white and ſlender, yielding, when wounded, a milky Humour. They are divided into two ſmall Branches, hanging out of a vermicular Proceſs (ſcarce an Inch long) which lies in the Belly, in that Place where the alimentary Canals are joined together, and leans on the Side of the wrinkled Canal, by the Help of the tranſverſal Fibres. Theſe Branches, in their Progreſs hence, creeping above and below the Canal of the Aliments, are very often reflected, intorted and folded; one at length freed from its Windings, ſtretches away ſtrait towards the *Anus*, into which it is inſerted in the Shape of a pretty ſtiff Veſſel; but the other, at the Side of the wrinkled Canal, being preſſed, collected, and equally inflected, almoſt through its whole Extent,

tent, by the tranſverſal Fibres, ends in the oppoſite Side, by an Extremity pendulous in the Belly, not far from the *Anus.*

The inner Coat of the Skin, juſt as in the Females, is all covered with ſmall whitiſh Bladders, turgid with Lymph, but leſs, in Proportion to the leſſer Bulk of the Worm.

Moreover, we found under the wrinkled Canal a certain whitiſh Duct expreſſed in *Fig.* 7, and marked with the Letters *b*, *b*, *b*, firmly connected to the aforeſaid Inteſtin by its fineſt Part; but whoſe Outlet or Origin, the Tenderneſs of the Inteſtin, and Fineneſs of the Duct hindred us from tracing with Exactitude.

So much I humbly beg, Sir, you'll not take amiſs. Furthermore, 'tis great Pity that the excellent Work of the moſt illuſtrious Count *Marſilli*, of the Hiſtory of the Sea, was ſo inaccurately printed. We have thought it well worth our while, not only to make the Corrections and Additions it wanted, but alſo to draw up an Index of its Contents, which we intend for our own more commodious Uſe of that Book. To theſe I add an Example thereof: And if it proves acceptable, you may expect, at a proper Time, the Fruits of another Labour, perhaps not leſs uſeful.

It remains to wiſh you all Proſperity, and aſſure you that I am, *&c.*

From my Study in Dantzick,
Decemb. 3*d*, 1726.

The EXPLICATION *of the Figures of the ſecond Plate, drawn according to their natural Bigneſs.*

Fig. 1. The Shape of a Female Worm; *a*, the Mouth of the Worm; *b*, the *Anus*; *c*, the *Vulva*; *d*, the Cheſnut-coloured Lines running along the Worm's Length.

Fig. 2. *a*, the Worm's Mouth; *b*, the alimentary Canal, which is white, carnous, *&c.* *c*, the alimentary Canal, which is brown and flatted, and whoſe Extremity is in the *Anus*; *d*, the Place where the Canals join; *e*, *e*, *e*, the tranſverſal Fibres; *f*, the *Anus*.

Fig. 3 and 4. *a*, the Worm's Mouth; *b*, *b*, the firſt alimentary Canal; *c*, *c*, the latter alimentary Canal; *d*, the Place where theſe two Canals cohere; *e*, *e*, *e*, the tranſverſal Fibres; *f*, *f*, *f*, the white Veſicles turgid with Lymph, with which all the inner Skin is thick beſet; *g*, the *Anus*; *h*, the *Vagina*; *s*, the *Oviduct*; *i*, the Outlet of the *Vagina*, or the *Vulva*; *k*, *k*, the Ovary fill'd with innumerable Eggs; *l*, *l*, the preparing Veſſels.

Fig. 5. The Eggs viewed though a Microſcope; *a*, through the Microſcope, N°. 3; *b*, through the Microſcope, N°. 2.

Fig. 6. A Male Worm; *a*, the Mouth of the Worm; *b*, *b*, the whitiſh alimentary Canal; *c*, *c*, the wrinkled Canal of the Aliments; *d*, the vermicular Proceſs of the

the ſpermatick Veſſels; *e*, *e*, a Branch of the ſpermatick Veſſels along the Side of the Inteſtin, compreſſed by the tranſverſal Fibres, and inflected through its whole Extent in an uniform Manner; *f*, *f*, *f*, the Windings and Turnings of the ſpermatick Veſſels; *g*, *g*, the tranſverſal Fibres; *h*, the cartilaginous Membrane ſurrounding the *Anus*; *i*, the ſmall Slit in its Middle; *k*, the very fine capillary Proceſs; *m*, *m*, the ſmall Bladders covering the Skin.

Fig. 7. A Male Worm inverted, and diſected about the *Anus*, in Order to ſee with Eaſe the Duct lying under the alimentary Canal; *a*, the wrinkled alimentary Canal; *b*, the whitiſh Duct under the wrinkled Canal; *c*, the ſpermatick Veſſels.

Fig. 8. *a*, the vermicular Proceſs of the ſpermatick Veſſels; *b*, *b*, the Branches of the ſpermatick Veſſels, freed from their Windings; *c*, *c*, the ſame Branches diſſected.

V. *Some material Obſervations upon diſſecting an Oſtrich, made lately by Mr.* Ranby, *Surgeon to his Majeſty's Houſhold, and F. R. S.*

ABout five Years ago, I laid before the Society ſome Obſervations made in an Oſtrich diſſected, by Order of Sir *Hans Sloane*, Bart. to which Account I beg Leave to add two or three more Obſervations which eſcaped my Notice in my former Diſſection. And *Firſt*, the Eye, the Figure of which, when

taken

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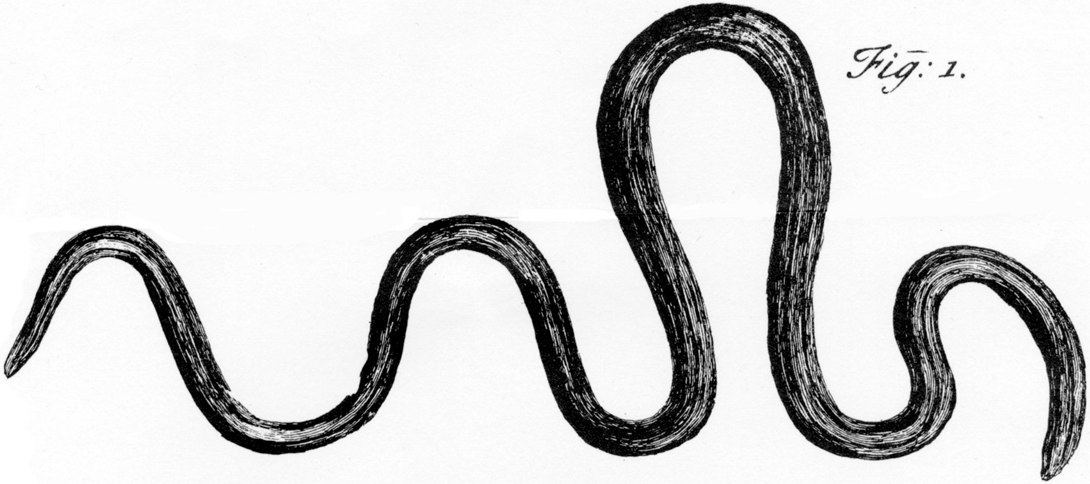

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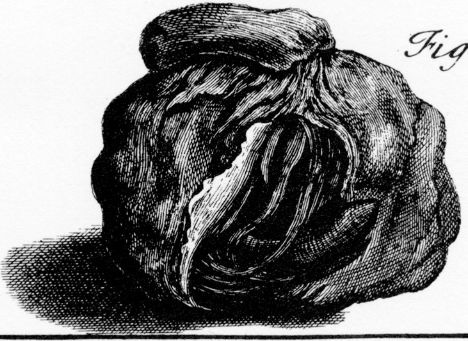

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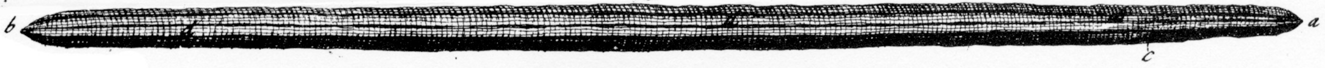

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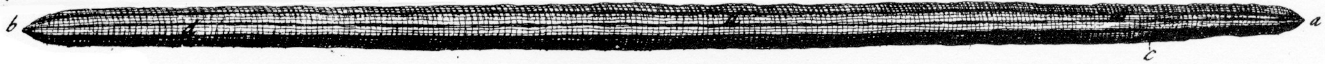

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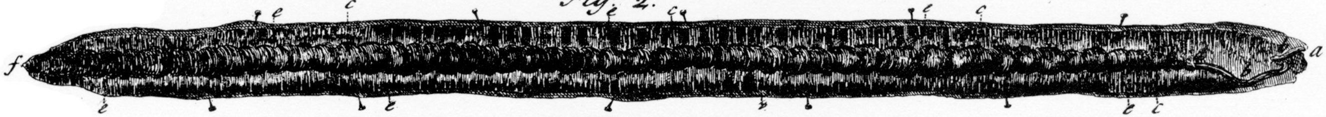

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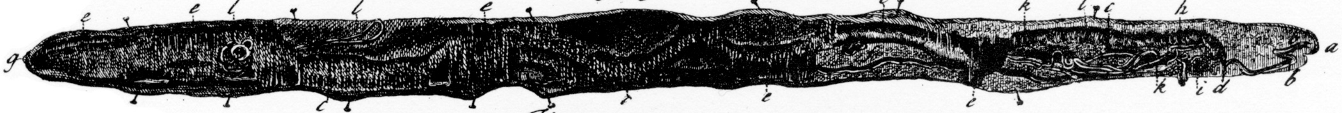

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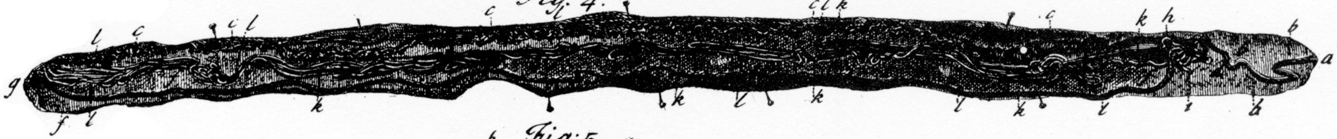

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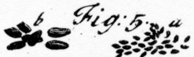

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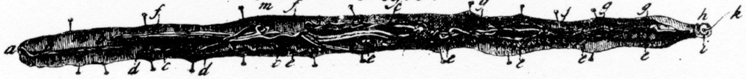

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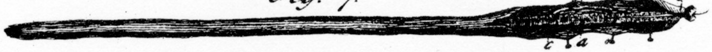

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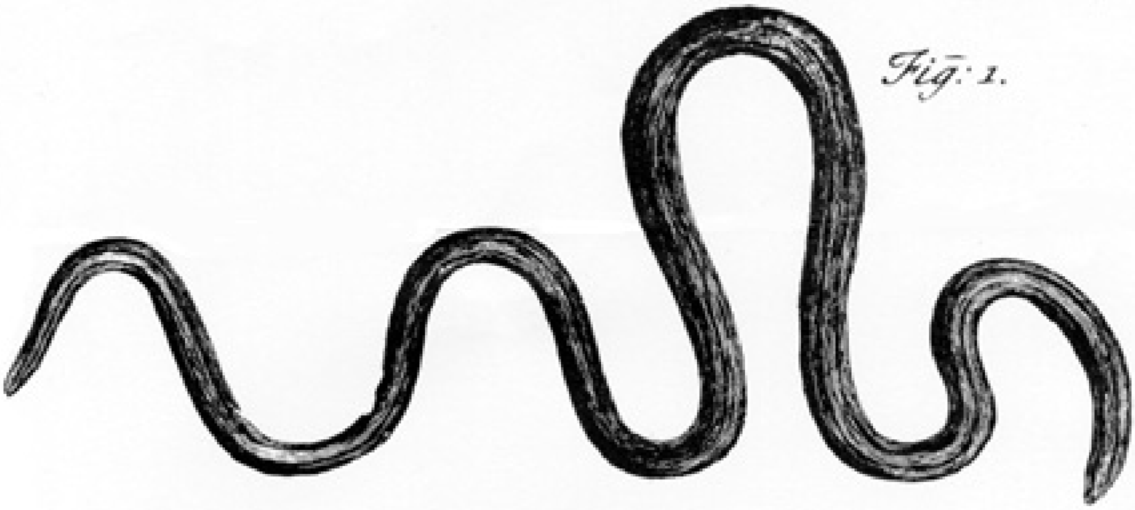

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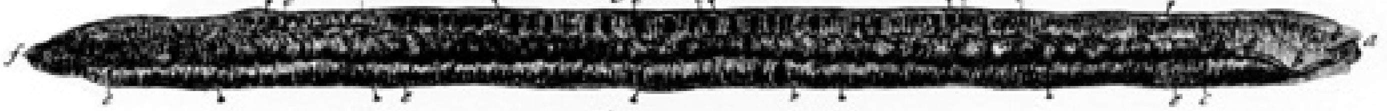

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